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Sung-Kyung Jang

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EXAMINER

ROBERTS, BRIAN S

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/650,792	<b>Applicant(s)</b> JANG, SUNG-KYUNG	
	<b>Examiner</b> BRIAN ROBERTS	<b>Art Unit</b> 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11-23, 26-29 and 32-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-23, 26-29 and 32-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

- Claims 1-6, 11-23, 26-29, and 32-38 remain pending.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/23/2009 has been entered.

### ***Claim Objections***

Claim 17-19, and 20-21 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6, 11-23, 26-29, and 32-38 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- In reference to claim 1, 11, 22

The limitation "window size downward setting information if a receiving buffer is an overflow and a downward window size is 1" was not described in the original disclosure, and thus constitutes new matter. The specification discloses that the window size control information includes window size downward setting wherein the downward window size is 1 in response to a receiving buffer is in an overflow state, and not that the window size downward setting information includes window size downward setting in response to both a receiving buffer is an overflow and a downward window size being 1 as the limitation currently reads. Furthermore, the limitation "window size upward setting information if a receiving buffer is not in an overflow and an upward setting level is up to an upper level" was not described in the original disclosure, and thus constitutes new matter. The original disclosure states that the window size control information includes window size upward setting information wherein the window size upward setting information is set up to an upper level in response to a receiving buffer not being in an overflow, and not that the window size control information includes window size upward setting information in response to both a receiving buffer is not in an overflow and an upward setting level is up to an upper level as the limitation currently reads.

- In reference to claims 36-38

The limitation "wherein the window size control information includes window size maintaining information" in claims 36-37, and similarly claim in 38, was not described in the original disclosure, and thus constitutes new matter. The specification does not describe window size maintaining information being transmitted along with window size upward or downward setting information. The window size control information can not include both a window size upward or downward setting and window size maintaining information.

- The dependent claims are rejected as depending from rejected independent claims 1, 11, and 22.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 11-23, 26-29, and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over ETSI TS 125 322 version 5.1.0 (2002-06) in view of Le et al. (US 6744730)

- In reference to claim 1

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling method in a radio system which transmits and receives data in an acknowledgement mode that includes receiving data units having serial numbers lying in a range of a receiving window (pg. 27 9.2.2.3), transmitting window size control information (pg. 33 9.2.2.11.3) from a receiver to a transmitter and varying a transmitting window size by the transmitter according to the transmitted window size control information wherein the window size control information includes window size downward setting information wherein the value may be set to a minimum value of 1 (pg. 33 9.2.2.11.3) or window size upward setting information wherein value may be set to a maximum value of  $2^{12} - 1$  (pg. 33 9.2.2.11.3) and is transmitted simultaneously with acknowledgement information (pg. 32 9.2.2.11.2).

ETSI TS 125 322 does not explicitly teach transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer that corresponds to the a receiving window. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the data unit containing the acknowledgement information of ETSI TS 125 322 to include transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow as suggested by Le et al. because it allows the window size data transmission rate to be varied in order to prevent continuous buffer overflow or under utilization of network resources.

- In reference to claim 2

In Figure 4.4, ETSI TS 125 322 further teaches the transmitter is a network and the receiver is a terminal. (pg. 15 4.2.1.3.1 ; 4.2.1.3.2)

- In reference to claim 3, 14, 27

In Figure 9.10, ETSI TS 125 322 further teaches the window size control information is contained in status information to be transmitted. (pg. 33 9.2.2.11.3)

- In reference to claim 4, 26

In Figure 9.10, ETSI TS 125 322 further teaches the window size control information is a window size super-field (SUFI). (pg. 33 9.2.2.11.3)

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- In reference to claim 5, 16, 28-29

In Figure 9.10, ETSI TS 125 322 further teaches the status information further includes an ACK SUFI. (pg 31 9.2.2.11)

- In reference to claim 6, 13, 23

In Figure 9.10, ETSI TS 125 322 further teaches the receiver adjusts a receiving window size to be the same as the transmitting window size. (pg. 33 9.2.2.11.3)

- In reference to claim 30-31

ETSI TS 125 322 teaches a system and method that covers substantially all limitations of the parent claim.

ETSI TS 125 322 does not teach the window size control information includes window size upward setting information if a receiving buffer is not in an overflow state.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the window Size control information of ETSI TS 125 322 to include window size upward setting information if a receiving buffer is not in an overflow



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state as suggested by Le et al. because it allows the window size to be varied in order to prevent utilization of network resources.

- In reference to claim 11, 17-19, and 20-21

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling method in a radio system which controls a flow of a radio link and includes an entity operated in an acknowledgement mode, wherein window size update information (pg. 33 9.2.2.11.3) is transmitted from a receiving entity to a transmitting wherein acknowledgement information (pg. 32 9.2.2.11.2) is transmitted simultaneously with the window size control information, the acknowledgement information controlling transmission of additional data units from the transmitter to the receiver, transmission of the additional data units controlled based on window size update information (pg. 15 4.2.1.3.1 ; 4.2.1.3.2) and wherein the window size update information includes window size downward setting information wherein the value may be set to a minimum value of 1 (pg. 33 9.2.2.11.3) or window size upward setting information wherein value may be set to a maximum value of  $2^{12} - 1$  (pg. 33 9.2.2.11.3).

ETSI TS 125 322 does not explicitly teach transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer or processing speed by the receiver of data units stored in a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow.

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In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the data unit containing the acknowledgement information of ETSI TS 125 322 to include transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer or processing speed by the receiver of data units stored in a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow as suggested by Le et al. because it allows the window size data transmission rate to be varied in order to prevent continuous buffer overflow or under utilization of network resources.

- In reference to claim 12

In Figure 4.4, ETSI TS 125 322 further teaches the entity is a radio link control (RLC). (pg. 15 4.2.1.3.1.; 4.2.1.3.2)

- In reference to claim 15

In Figure 9.10, ETSI TS 125 322 further teaches the window size update information is included in a window size super-field (SUFI). (pg. 33 9.2.2.11.3)

- In reference to claim 22

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling method in a radio data transfer of a mobile communication system that includes receiving at least one protocol data unit (PDU) from a transmitting RLC entity; transmitting window size control (pg. 33 9.2.2.11.3) to the transmitting RLC entity and varying a transmitting window size according to the window size control information by the transmitting RLC entity and transmitting additional PDUs to be stored in a receiving buffer wherein acknowledgement information (pg. 32 9.2.2.11.2) is transmitted simultaneously with the window size control information, the acknowledgement information controlling transmission of additional PDUs based on the varied transmitting window (pg. 15 4.2.1.3.1.; 4.2.1.3.2) wherein the window size control information includes window size downward setting information wherein the value may be set to a minimum value of 1 (pg. 33 9.2.2.11.3) or window size upward setting information wherein value may be set to a maximum value of  $2^{12} - 1$  (pg. 33 9.2.2.11.3).

ETSI TS 125 322 does not teach transmitting window size control information from a receiver to a transmitter by a state of a receiving buffer.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the

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receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the data unit containing the acknowledgement information of ETSI TS 125 322 to include transmitting window size control information from a receiver to a transmitter by a state of a receiving buffer as suggested by Le et al. because it allows the window size and data transmission rate to be varied in order to prevent buffer overflow or under utilization of network resources.

window size downward setting information wherein the minimum value is 1 (pg. 33 9.2.2.11.3) window size upward setting information wherein the maximum value is  $2^{12} - 1$  (pg. 33 9.2.2.11.3) and is transmitted simultaneously with acknowledgement information (pg. 32 9.2.2.11.2).

ETSI TS 125 322 does not explicitly teach transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer that corresponds to the a receiving window. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and

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instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the data unit containing the acknowledgement information of ETSI TS 125 322 to include transmitting window size control information from a receiver to a transmitter based on a state of a receiving buffer wherein the window size control information includes a downward window size if the receiving buffer is in an overflow and including the window size control information to be an upward setting level if the receiving buffer is not in an overflow as suggested by Le et al. because it allows the window size data transmission rate to be varied in order to prevent continuous buffer overflow or under utilization of network resources.

- In reference to claim 32

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially covers all limitations of the parent claims. ETSI TS 125 322 further teaches the acknowledgement information is included in a first super-field (pg. 32 9.2.2.11.2 and the window size control information is included in a second super-field (pg. 33 9.2.2.11.3) within a status PDU from the receiver to the transmitter. (pg. 15 4.2.1.3.1.; 4.2.1.3.2)

- In reference to claim 33

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially covers all limitations of the parent claims. ETSI TS 125 322 further teaches the transmitting window size is varied to a size which allows previously received data stored in the receiving buffer to be arranged in sequence without said additional data being lost in the receiving buffer. (pg. 15 4.2.1.3.1; 4.2.1.3.2)

- In reference to claim 34

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially, covers all limitations of the parent claims. ETSI TS 125 322 further teaches adjusting a window size of the receiving buffer based on the window size control information. (pg. 36; 9.2.2.11.8)

- In reference to claim 35

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially covers all limitations of the parent claims. ETSI TS 125 322 further teaches the varied window size of the receiving buffer (pg. 36 9.2.2.11.8) can be adjusted to be equal to the transmitting window size (pg. 33 9.2.2.11.3; 9.4) varied based on the window size control information.

- In reference to claim 36-37

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially covers all limitations of the parent claims. ETSI TS 125 322 further

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teaches the window size control information includes window maintaining information.

(pg. 33 9.2.2.11.3)

- In reference to claim 38

The combination of ETSI TS 125 322 and Le et al. teaches a system and method that substantially covers all limitations of the parent claims. ETSI TS 125 322 further teaches the window size update information includes window maintaining information.

(pg. 33 9.2.2.11.3)

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 11, and 22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSR

03/27/2009

/Hong Cho/

Primary Examiner, Art Unit 2419